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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,772	04/04/2001	Laure Seguin	205513US2	1507
22850	7590	09/15/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LY, ANH VU H	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,772

Applicant(s)

SEGUIN, LAURE

Examiner

Anh-Vu H Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3 and 5</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the title of the invention should not be included under the abstract heading. Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because of the following informalities: section headings were not presented in the specification. Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino

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acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

3. Claims 5-10 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim shall refer to such other claims in the alternative only. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 3, 4, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Ahmadvand (US Patent No. 6,477,670 B1).

With respect to claim 1, Ahmadvand discloses in Fig. 2, an UMTS system comprises RRC 44, RLC 70, MAC 80, and Physical Layer 20. In UMTS system, RRC is known for

handling and controlling the radio resource of the system. Ahmadvand discloses (col. 6, lines 29-32) that the subflow processing module 71 initiates a QoS plane for each CoS under the supervision of RRC unit 44 (a layer RRC responsible for management of the physical resource and the guarantee of the quality of service). Ahmadvand discloses (col. 5, lines 57-61) that D-RLC and C-RLC receive the IP data packets 45, create the RLC PDUs, or RLC frames (a sub-layer RLC responsible for supplying a transmission support in accordance with the required quality of service and being able to segment the data into transmission units RLC PDU) and deliver the RLC frames over logical channels 15 to the MAC sublayer 80 to be multiplexed onto different transport channels 25 (transmission time intervals) (a sub-layer MAC responsible for access to the physical resource and being able to transmit at least one transmission unit per transmission time interval) and forwarded to the physical layer (Fig. 3) (a physical layer responsible for the physical processing of the data). Ahmadvand discloses (col. 6, lines 62-65) that the size of a sequence frame 74 (size of transmission unit) may be variable and dynamically optimized in different QoS planes based on the QoS requirements and on the radio link conditions (characterized in that, in the event of degradation of the transmission conditions on the physical resource, the size of the transmission units is reduced).

With respect to claim 3, Ahmadvand discloses (col. 6, lines 29-32) that the subflow processing module 71 initiates a QoS plane for each CoS under the supervision of RRC unit 44. Further, Ahmadvand discloses (col. 6, lines 62-65) that the size of a sequence frame 74 may be variable and dynamically optimized in different QoS planes based on the QoS requirements and on the radio link conditions. This means that each QoS plane, under the direction of RRC,

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creates RLC PDU frame according to a unique frame size (at the start of the connection between a transmitter and a receiver accessing the physical resource, the RRC layer fixes a first size of transmission unit RLC PDU according to the transmission conditions and transmits it to the sub-layer MAC).

With respect to claim 4, Ahmadvand discloses (col. 6, lines 62-65) that the size of a sequence frame 74 may be variable and dynamically optimized in different QoS planes based on the QoS requirements and on the radio link conditions (in the case of degradation of the transmission conditions on the physical resource, the layer RRC fixes a second size of the transmission unit less than the first and transmits it to the sub-layer MAC).

With respect to claim 8, Ahmadvand discloses in Fig. 3, architecture of the UMTS protocols (UMTS mobile telephone system using a data transmission method).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmadvand (US Patent No. 6,477,670 B1) in view of Sarkkinen et al (US Pub 2001/0033582 A1). Hereinafter, referred to as Ahmadvand and Sarkkinen.

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With respect to claims 2, 9, and 10, Ahmadvand discloses (col. 6, lines 62-65) that the size of a sequence frame 74 may be variable and dynamically optimized in different QoS planes based on the QoS requirements and on the radio link conditions (select a transmission unit size according to the transmission conditions, a smaller size being selected in the case of degradation of the transmission conditions on the physical resource). Ahmadvand does not disclose the RRC layer determines a plurality of possible transmission unit sizes for a transmission time interval and in that the sub-layer MAC selects, from amongst this plurality, a transmission unit size. Sarkkinen discloses on page 4, 58th paragraph, that the UTRAN/MAC will obtain a TFC from RRC and will make a TF selection for an upcoming TTI (transmission interval). It will inform the UTRAN/Tr-RLC of the appropriate data block size and data block set size. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the features of sending a TFC to MAC for and determining an appropriate packet size in Ahmadvand's system, as suggested by Sarkkinen, to accommodate QoS requirements and radio link conditions.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmadvand (US Patent No. 6,477,670 B1) in view of Johansson et al (US Patent No. 6,473,399 B1). Hereinafter, referred to as Ahmadvand and Johansson.

With respect to claim 7, Ahmadvand discloses in Fig. 3, a method for encapsulating and creating an RLC frame in UMTS system. Ahmadvand does not disclose that the RLC functions in the acknowledged mode, a transmission unit being retransmitted if the acknowledgment is not received. Johansson discloses in Figs. 3 and 5-8, an UMTS system 64 enables retransmissions

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when acknowledgments are not received. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of retransmissions when acknowledgments are not received in Ahmadvand's system, as suggested by Johansson, to guarantee that packets are delivered correctly.

Allowable Subject Matter

7. Claims 5 and 6 (assumed dependent claim 6 depends on objected dependent claim 5 since both claims 5 and 6 mentioned the SIR level) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kalliokulju et al (US Patent No. 6,618,591 B1) discloses mechanism to benefit from MIN and MAX birates.


Lundsjo et al (US Patent No. 6,473,442 B1) discloses communications system and method for matching and balancing the bit rates of transport channel to the bit rate of a physical channel.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

avl


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 9/13/09